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EXAMINER

HOYE, MICHAEL W

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/880,301	MAEDA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael W. Hoye	2623	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/24/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on August 24, 2006 has been entered.

### ***Response to Arguments***

2. Applicants' arguments filed on August 24, 2006 have been fully considered but they are not persuasive.

As a general note, the Applicants' amendments to the claims actually describe the prior art of record in more specific detail.

Regarding amended independent claim 13, the Applicants argue on pages 13-14 that, "The display devices of the present invention receive radio signals from the channel selection apparatus that provides a respective radio signal for each display device is distinguishable from Hylton wherein all of the broadcast signals are multiplexed into a single signal that is received by all the display devices demultiplexed at the display device."

On page 14, the Applicants argue that, "In particular, Hylton does not disclose, "[the] display apparatus is arranged to receive only a respective signal from the channel selection apparatus, the channel selection apparatus having a plurality of demodulation sections for

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selecting the respective signal in accordance with the respective information transmitted from the display apparatus” as recited in claim 13.”

In response, the Examiner respectfully disagrees with the Applicants because Hylton clearly discloses that “the display apparatus is arranged to receive only a respective signal from the channel selection apparatus” as met by the display apparatus (television set or TV 103 in Fig. 1) receiving only the selected program through the set-top 100 (including TIM 101 and DET 102) from the channel selection apparatus (shared processing system 10), which includes channel selector 11 and program selector 13 associated with or serving the set-top 100 that sent the request (see Fig. 1 and col. 8, line 6 - col. 9, line 28), and the claimed “channel selection apparatus having a plurality of demodulation sections for selecting the respective signal in accordance with the respective information transmitted from the display apparatus” is met by the shared processing system 10 and more specifically the channel selectors 11 in Fig. 1 as described above.

Regarding amended independent claim 1, presents similar arguments as stated above for claim 13 on pages 14-16. On page 15, in the 1<sup>st</sup> paragraph, the Applicants argue that, “the display devices of Hylton are each configured to receive the multiplexed signal that contains all of the broadcast signals for all of the display devices...”, and in the 2<sup>nd</sup> paragraph the Applicants argue that:

“In contrast, claim 1, as amended, recites, “a channel selection apparatus . . . having a plurality channel selection sections each having a respective demodulation section for selecting respective broadcasting programs. . . . transmitting respective signals of the selected broadcasting programs . . . wherein the channel selection apparatus includes a multicoupler . . . a plurality of display apparatus for receiving only a respective signal from said channel selection apparatus.” As discussed above, in the present invention,

the channel selection apparatus (3) includes a plurality of channel selection sections and a plurality of demodulation sections so that the channel selection apparatus transmits signals of different contents individually to the display apparatus (4), (5) and (6). As discussed above, Hylton multiplexes the broadcast signal and, hence, does not “transmit respective signals” as recited in claim 1.”

In response, the Examiner respectfully disagrees with the Applicants for the same reasons described above regarding the amended claim language of independent claim 13.

Furthermore, the Applicants argue on pages 15-16 that, “the display apparatus (4), (5) and (6) are configured so that each can receive only the transmission signal from the channel selection apparatus (3) destined for the respective display apparatus. . . . This element is distinguishable from Hylton in which each display device is configured to receive the multiplexed signal that is destined for all the display devices.”

In response, the Examiner respectfully disagrees with the Applicants because, as previously stated above, the display apparatus (television set or TV 103 in Fig. 1) receives only the selected program through the set-top 100 (including TIM 101 and DET 102) from the channel selection apparatus (shared processing system 10), which includes channel selector 11 and program selector 13 associated with or serving the set-top 100 that sent the request (see Fig. 1 and col. 8, line 6 - col. 9, line 28). The display device 103 receives and displays only the selected program on the selected channel.

Furthermore, the Applicants argue on page 16 that, “There is also no motivation to combine the Hylton and Phillips references for the present application’s recitation of a multicoupler. A multicoupler permits a number of transmitters and receivers to operate effectively on different frequencies from the same antenna, simultaneously and without interfering with one another. The multicoupler provides for the transmission and receipt of the

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different modulated frequencies on the same antenna. The Hylton device has no need for a multicoupler to transmit the broadcast signal because the signal is a single multiplexed signal. Thus, there would be no motivation to combine the Hylton device with a multicoupler device such as used in Phillips.”

In response to the Applicants’ argument that there is no suggestion or motivation to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Examiner respectfully disagrees with the Applicants because the Hylton et al reference discloses a transmitting and receiving antenna 27 (Fig. 1 and Fig. 7), which receives and transmits multiple different modulated frequencies on the same antenna (see col. 7, line 66 – col. 9, line 8). Hylton does not explicitly disclose a “multicoupler” coupled to the antenna. However, Phillips et al specifically teaches that a sophisticated tunable antenna multicoupler may be used in place of filters and duplexers in order to further eliminate unwanted signal noise or crosstalk and to pick out the signal of interest from among multiple signals or strong interference (see Fig. 5 and col. 25, line 52 – col. 26, line 6). In addition to, the multiplexer of Phillips et al combines multiple parts into a single integral part. Therefore, it would have been clearly obvious to one of ordinary skill in the art to have combined the antenna system of Hylton et al with the antenna system of Phillips et al, which also receives and transmits multiple channels on the same antenna and further includes the use of a

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multicoupler for the advantages of eliminating unwanted signal noise as well as reducing the number of parts in the system as described above and in the previous Office Action. One of ordinary skill in the art would have been led to make such a modification since multicoupler devices are well known in the art and specifically used for the advantages given above.

Regarding amended independent claims 7 and 19, the Applicants refer to the arguments described above with regard to amended independent claim 1, and the Examiner respectfully disagrees for the reasons stated above.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hylton et al (USPN 5,708,961), previously cited by the Examiner.

To serve as a brief overview, the Hylton reference discloses a system for providing wireless on-premises video distribution over a RF frequency in the home. The system consists of a Shared Processing System 10 (containing multiple Channel Selection Interfaces 11, multiple Program Selection Interfaces 13, a modulator 17, and a bi-directional antenna 27) and multiple user stations (each of which comprises an STB 100, a TV 103, a bi-directional antenna 29, and a remote control 85). The Shared Processing System serves to receive programming from a digital

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broadband network 5 and distribute it over an in-house wireless RF modulated frequency to the user stations.

Regarding claim 13, the claimed “display apparatus for receiving a radio signal from a channel selection apparatus connected to a communication circuit and displaying an image based on an image signal of the received signal on a display element” is met by the antenna 29, which receives the broadcast channel and supplies the signal to the TIM 101, which demodulates the signal and supplies the transport stream to the DET 102. The DET 102 then decodes the program and produces the signal on a TV 103 [col. 9, lines 8-28]. The claimed “wherein the display apparatus is arranged to transmit respective information to the channel selection apparatus that includes indicia associated with said display apparatus” is met by the Hylton reference wherein it teaches sending a request from the DET 102 to the shared processing system 10 via antenna 27 and transceiver 21. After the transceiver 21 receives the request, it provides the request to the controller 19 for processing. The controller will recognize the message (request) as relating to a channel selection by the particular one of the set-top terminals 100 [col. 8, lines 35-67]. In other words, the controller can recognize the particular set-top terminal because the set-top terminal identifies itself when making a request to the shared processing system 10. The claimed “display apparatus is arranged to receive only a respective signal from the channel selection apparatus” is met by the display apparatus (television set or TV 103 in Fig. 1) receiving only the selected program through the set-top 100 (including TIM 101 and DET 102) from the channel selection apparatus (shared processing system 10), which includes channel selector 11 and program selector 13 associated with or serving the set-top 100 that sent the request (see Fig. 1 and col. 8, line 6 - col. 9, line 28), and the claimed “channel selection



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apparatus having a plurality of demodulation sections for selecting the respective signal in accordance with the respective information transmitted from the display apparatus” is met by the shared processing system 10 and more specifically the channel selectors 11 in Fig. 1 as described above.

Regarding claim 14, the claimed “display apparatus according to claim 13, wherein said display apparatus receives the radio signal from said channel selection apparatus obtained through the communication circuit, forms a displaying signal from the received signal and displays an image based on the displaying signal on said display element” is met by the reception of the signal over RF link via antenna 29. After the antenna 29 receives the signal, the TIM 101 processes the signal and sends it to the DET 102 for further processing and display to TV 103 [col. 9, lines 9-28].

Regarding claim 15, the claimed “display apparatus according to claim 13, comprising means for receiving a signal of compressed data transmitted by radio from said channel selection apparatus and decompressing the received signal” is met by the decoder of the DET 102, which can process the compressed information for the selected program from the transport stream output by the TIM 101 [col. 9, lines 21-25].

Regarding claim 16, the claimed “display apparatus according to claim 13, further comprising: instruction input acceptance means for accepting an operation instruction input of the user; and instruction information transmission means for transmitting by radio at least instruction information to be transmitted to said channel selection apparatus from within instruction information of the operation instruction input accepted by said instruction input acceptance means” is met by the DET 102, which serves to receive the program selection from

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the remote control 85 and supply the channel request to the TIM 101 for wireless transmission via antenna 29 [col. 8, lines 35-40]. Antenna 27 at the Shared Processing System 10, then serves to receive the channel request from antenna 27 and issue a command to the controller 19 to control the channel and program selections interfaces (11 and 13, respectively) [col. 8, lines 60-66].

Regarding claim 17, the claimed “display apparatus according to claim 13, further comprising: transmission instruction input acceptance means for accepting a transmission instruction input from the user; and transmission information transmitting means for transmitting information corresponding to information indicated by the transmission instruction input accepted by said transmission instruction input acceptance means as transmission information by radio” is met by the DET 102, which serves to receive the program selection from the remote control 85 and supply the channel request to the TIM 101 for wireless transmission via antenna 29 [col. 8, lines 35-40]. Antenna 27 at the Shared Processing System 10, then serves to receive the channel request from antenna 27 and issue a command to the controller 19 to control the channel and program selections interfaces (11 and 13, respectively) [col. 8, lines 60-66].

Regarding claim 18, the claimed “display apparatus according to claim 13, wherein said display apparatus receives a plurality of signals transmitted by radio from said channel selection apparatus and displays an image based on an image signal of one of the signals on said display element” is met by the fact that the shared processing system 10, can modulate multiple signals onto the in-home wireless RF link for reception by different user terminals 100. The plurality of broadcasting signals can be received by the plurality of channel selection circuits 11 in the shared processing system 10 [col. 5, lines 58-60 & col. 6, lines 2-4].

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-12 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylton et al. (USPN 5,708,961), in view of Phillips et al (USPN 6,072,994), both cited by the Examiner.

Regarding claim 1, note the Hylton et al reference which discloses a “television reception system”. The claimed “channel selection apparatus for receiving broadcasting signals, and having a plurality of channel selection sections each having a respective demodulation section for selecting respective broadcasting programs from within the broadcasting signals in accordance with instructions of respective users and transmitting respective signals of the selected broadcasting programs by radio, said channel selection apparatus being connected to a communication circuit” is met by the Shared Processing System 10 [Fig. 1], which serves to receive instructions from a user via remote control interface 85, TIM 101, and antennas 29 and 27 over a wireless RF connection [col. 8, line 6 - col. 9, line 28]. The user instruction then serves to issue a command to the controller to control the channel selector 11 and program selector 13 to select a program from the digital broadband network 5 [col. 8, lines 60-65]. The modulator then serves to modulate the selected program into a transport stream for wireless broadcast via antenna 27 to the antenna 29 of the user terminal 100 [col. 9, lines 6-10]. The

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claimed “wherein the channel selection apparatus includes a multicoupler to permit transmitting and receiving of signals on different frequencies on the same antenna, either alone or simultaneously and without interfering with one another” is met in-part by Hylton et al which teaches transmitting using spread spectrum (frequency hopping on different frequency bands) modulation [col. 3, lines 24-25 & col. 6, lines 35-57] and code-division multiple access (CDMA) techniques. It is even extremely clear in Figure 1 that only one bi-directional antenna 27 is used. Also, Hylton clearly points out that the use of spread spectrum for the on premises distribution presents the advantage of multiple spread spectrum systems operating independently of each other within the same band. Thus multiple independently tuned television sets may operate without interference within the same premise and in adjoining premises [col. 7, lines 50-65]. Hylton does not explicitly disclose a “multicoupler” coupled to the antenna. However, Phillips et al specifically teaches that a sophisticated tunable antenna multicoupler may be used in place of filters and duplexers in order to further eliminate unwanted signal noise or crosstalk and to pick out the signal of interest from among multiple signals or strong interference (see Fig. 5 and col. 25, line 52 – col. 26, line 6). In addition to, the multiplexer of Phillips et al combines multiple parts into a single integral part. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the Hylton et al reference, which discloses a transmitting and receiving antenna, with the antenna system of Phillips et al, which receives and transmits multiple channels on the same antenna and may further include the use of a multicoupler for the advantages of eliminating unwanted signal noise as well as reducing the number of parts in the system as described above. One of ordinary skill in the art would have been led to make such a modification since multicoupler devices are well known in the art and

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specifically used for the advantages given above. The claimed “a plurality of display apparatus each for receiving only the respective signal from said channel selection apparatus and displaying an image based on an image signal of the received signal on a display element thereof” is met by the antenna 29, which receives the broadcast channel and supplies the signal to the TIM 101, which demodulates the signal and supplies the transport stream to the DET 102. The DET 102 then decodes the program and produces the signal on a TV 103 [see col. 8, line 6 - col. 9, line 28 and more specifically col. 9, lines 8-28].

Regarding claim 2, the Hylton et al reference further discloses the claimed “television reception system according to claim 1, wherein said channel selection apparatus includes reception means for receiving a signal transmitted thereto through the communication circuit, and means for transmitting the signal received by said reception means by radio, and said display apparatus receives the radio signal from said channel selection apparatus, forms a displaying signal from the received signal and displays an image based on the displaying signal on said display element” as met by the antenna 27 of the shared processing system 10, for receiving user channel selection over the RF link and sending program selection video over the same RF link to the user antenna 29 for display at the TV 103 [col. 8, line 35 – col. 9, line 28].

Regarding claim 3, the Hylton et al reference further discloses the claimed “television reception system according to claim 1, wherein said channel selection apparatus transmits a signal of compressed data by radio, and said display apparatus includes decompression means for decompressing the data of the received signal from said channel selection apparatus” as met by the decoder of the DET 102, which can process the compressed information for the selected program from the transport stream output by the TIM 101 [col. 9, lines 21-25].

Regarding claim 4, the Hylton et al reference further discloses the claimed “television reception system according to claim 1, wherein said display apparatus includes instruction input acceptance means for accepting an operation instruction input of the user, and instruction information transmission means for transmitting by radio at least instruction information to be transmitted to said channel selection apparatus from within instruction information of the operation instruction input accepted by said instruction input acceptance means, and said channel selection apparatus includes control means for receiving the instruction information transmitted by radio from said display apparatus and controlling, when the received instruction information is for said channel selection apparatus itself, so as to perform processing based on the instruction information” as met by the DET 102, which serves to receive the program selection from the remote control 85 and supply the channel request to the TIM 101 for wireless transmission via antenna 29 [col. 8, lines 35-40]. Antenna 27 at the Shared Processing System 10, then serves to receive the channel request from antenna 27 and issue a command to the controller 19 to control the channel and program selections interfaces (11 and 13, respectively) [col. 8, lines 60-66].

Regarding claim 5, the Hylton et al reference further discloses the claimed “television reception system according to claim 1, wherein said display apparatus includes transmission instruction input acceptance means for accepting a transmission instruction input from the user, and transmission information transmitting means for transmitting information corresponding to information indicated by the transmission instruction input accepted by said transmission instruction input acceptance means as transmission information by radio, and said channel selection apparatus includes transmission information reception means for receiving the transmission information transmitted thereto by radio from said display apparatus, and

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transmission information signaling means for signaling the transmission information received by said transmission information reception means through the communication circuit” as met by the DET 102, which serves to receive the program selection from the remote control 85 and supply the channel request to the TIM 101 for wireless transmission via antenna 29 [col. 8, lines 35-40]. Antenna 27 at the Shared Processing System 10, then serves to receive the channel request from antenna 27 and issue a command to the controller 19 to control the channel and program selections interfaces (11 and 13, respectively) [col. 8, lines 60-66].

Regarding claim 6, the Hylton et al reference further discloses the claimed “television reception system according to claim 1, wherein said channel selection apparatus can select a plurality of broadcasting signals simultaneously and transmit signals of a plurality of broadcasting programs selected by a user in a separable state from each other by radio, and said display apparatus receives the signals transmitted by radio from said channel selection apparatus and displays an image based on an image signal of one of the signals on said display element” as met by the fact that the shared processing system 10, can modulate multiple signals onto the in-home wireless RF link for reception by different user terminals 100. The plurality of broadcasting signals can be received by the plurality of channel selection circuits 11 in the shared processing system 10 [col. 5, lines 58-60 & col. 6, lines 2-4].

Regarding claim 7, note the Hylton et al reference which discloses the claimed “channel selection apparatus for receiving broadcasting signals, and having a plurality of channel selection sections each having a respective demodulation section for selecting respective broadcasting programs from within the broadcasting signals in accordance with instructions of respective users and transmitting respective signals of the selected broadcasting programs by radio; said

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channel selection apparatus being connected to a communication circuit” as met by the shared processing system 10 [Fig. 1] including channel selectors 11, which serves to select broadcast program from the digital broadband network 5 in accordance with user selections sent via remote control 85 and DET 102 over wireless RF link via antennas 29 and 27. The Shared Processing System 10 then modulates the selected signals onto the RF frequency band and transmits them to the user terminals 100 via antenna 27 [col. 8, line 6 – col. 9, line 28]. The claimed “wherein the channel selection apparatus includes a multicoupler to permit transmitting and receiving of signals on different frequencies on the same antenna, either alone or simultaneously and without interfering with one another” is met in-part by Hylton which teaches transmitting using spread spectrum (frequency hopping on different frequency bands) modulation [col. 3, lines 24-25 & col. 6, lines 35-57] and code-division multiple access (CDMA) techniques. It is even extremely clear in Figure 1 that only one bi-directional antenna 27 is used. Also, Hylton clearly points out that the use of spread spectrum for the on premises distribution presents the advantage of multiple spread spectrum systems operating independently of each other within the same band. Thus multiple independently tuned television sets may operate without interference within the same premise and in adjoining premises [col. 7, lines 50-65]. Hylton does not explicitly disclose a “multicoupler” coupled to the antenna. However, Phillips et al specifically teaches that a sophisticated tunable antenna multicoupler may be used in place of filters and duplexers in order to further eliminate unwanted signal noise or crosstalk and to pick out the signal of interest from among multiple signals or strong interference (see Fig. 5 and col. 25, line 52 – col. 26, line 6). In addition to, the multiplexer of Phillips et al combines multiple parts into a single integral part. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the



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invention to have combined the Hylton et al reference, which discloses a transmitting and receiving antenna, with the antenna system of Phillips et al, which receives and transmits multiple channels on the same antenna and may further include the use of a multicoupler for the advantages of eliminating unwanted signal noise as well as reducing the number of parts in the system as described above. One of ordinary skill in the art would have been led to make such a modification since multicoupler devices are well known in the art and specifically used for the advantages given above.

Regarding claim 8, the Hylton et al reference further discloses the claimed “channel selection apparatus according to claim 7, comprising: reception means for receiving a signal transmitted thereto through the communication circuit; and means for transmitting the signal received by said reception means by radio” as met by the antenna 27 for receiving a user selection transmitted by antenna 27 through RF link [col. 8, lines 40-42] and the antenna 27 that transmits the signal from the shared processing system 10 to the user terminals via RF link [col. 9, lines 6-11].

Regarding claim 9, the Hylton et al reference further discloses the claimed “channel selection apparatus according to claim 7, wherein the signal to be transmitted by radio is in the form of compressed data” as met by the decoder of the DET 102, which can process the compressed information for the selected program from the transport stream output by the TIM 101 [col. 9, lines 21-25].

Regarding claim 10, the Hylton et al reference further discloses the claimed “channel selection apparatus according to claim 7, further comprising control means for receiving instruction information transmitted by radio from a display apparatus and controlling, when the

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received instruction information is for said channel selection apparatus, so as to perform processing based on the instruction information” as met by Antenna 27 at the Shared Processing System 10, which serves to receive the channel request from antenna 27 and issue a command to the controller 19 to control the channel and program selections interfaces (11 and 13, respectively) [col. 8, lines 60-66].

Regarding claim 11, the Hylton et al reference further discloses the claimed “channel selection apparatus according to claim 7, further comprising transmission information reception means for receiving transmission information transmitted thereto by radio from a display apparatus, and signaling means for signaling the transmission information received by said transmission information reception means through the communication circuit” as met by the antenna 27, which receives the transmission from antenna 29 regarding the user channel selection and signal data transceiver 21 and controller 19, which serve to act upon the received signal for selection of a channel [col. 8, lines 40-45].

Regarding claim 12, the Hylton et al reference further discloses the claimed “channel selection apparatus according to claim 7, wherein said channel selection apparatus can select a plurality of broadcasting signals simultaneously and transmit signals of a plurality of broadcasting programs selected by a user in a separable state from each other by radio” as met by the fact that the shared processing system 10, can modulate multiple signals onto the in-home wireless RF link for reception by different user terminals 100. The plurality of broadcasting signals can be received by the plurality of channel selection circuits 11 in the shared processing system 10 [col. 5, lines 58-60 & col. 6, lines 2-4].

Regarding claim 19, the claim is rejected based on similar grounds as the rejection of claim 1 as stated above.

Regarding claim 20, the Hylton et al reference further discloses the claimed “television reception system of claim 19, wherein the channel selection apparatus further comprises a transmission processing section coupled to the multicoupler to demodulate the selected broadcast programs into broadcast signals of different frequency bands from one another prior to transmitting to the display apparatus” as met by the channel selection 11 and program selection 13 sections, which demultiplex and demodulate the received and requested programs and multiplex them together for transmission via antenna 27 [Figure 1 & col. 5, line 58 – col. 6, line 4].

Regarding claim 21, the Hylton et al reference further discloses the claimed “television reception system of claim 20, wherein each display apparatus is responsive to a respective frequency band” as met by the fact that the set-top terminals can use the relevant frequency spectrum to receive programming from the shared processing system 10 [col. 7, lines 35-40]. Also, the receivers distinguish transmission from different modulators by demodulating signals using the same code as used by the respective modulators [col. 6, lines 41-44].

Regarding claim 22, the claim is rejected based on similar grounds as the rejection of claim 13 as stated above.

Regarding claim 23, the Hylton et al and Phillips et al references disclose the claimed television reception system of claim 1 as described above. Hylton and Phillips do not explicitly disclose that the channel selection apparatus as well as each display apparatus are configured to receive and transmit electronic mail and Internet information as presented in the claim.

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However, the Examiner takes Official Notice that it is notoriously well known in the art of interactive video distribution systems to receive and transmit electronic email and Internet information for the advantage of combining personal computer related technology with interactive television systems for the convenience of having all the functionality in a single device. Therefore, it is submitted that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to have included the ability to receive and transmit electronic email and Internet information in the television reception system as claimed for the advantage given above.

Regarding claim 24, the claim is rejected based on the rejections of claims 1 and 23 as described above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael W. Hoyer whose telephone number is **571-272-7346**. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at **571-272-7353**.

**Any response to this action should be mailed to:**

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Michael W. Hoyer  
November 8, 2006

  
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